

REMARKS

This application contains claims 1-48. Claims 1, 16, 17, 32, 33 and 48 are hereby amended. No new matter has been introduced. Reconsideration is respectfully requested.

Applicant thanks Examiners Hashemi and Colan for the courtesy of a personal interview with Applicant's representative, Sanford T. Colb (Reg. No. 26,856), held in the USPTO on June 15, 2006. At the interview, Mr. Colb presented a draft amendment to claim 1 and explained the distinction of the claimed invention over the cited art. The Examiners agreed that this amendment would distinguish the invention over the art of record. The independent claims have accordingly been amended as proposed at the interview, with additional changes of wording suggested by the Examiners.

Claims 16, 32 and 48 were rejected under 35 U.S.C. 112, second paragraph, for use of the term "substantially." Applicant has amended these claims to remove this term.

Claims 1-48 were rejected under 35 U.S.C. 103(a) over Black (US 6,978,324) in view of Bakke et al. (US 2003/0023808). Applicant has amended independent claims 1, 17 and 33, as agreed in the interview, in order to clarify the distinction of the present invention over the cited art.

Claim 1, as amended, recites a method for data storage management that uses a record of locations to which the host processor is expected to write data in managing data backup to a secondary storage subsystem. This record is maintained by the storage system and may be used in determining which data to copy back from the secondary to the primary storage subsystem during failure recovery (see paragraph 0009 et seq. in the published version of this application, US 2005/0071388). As explained in the application, the record

is "predictive" in that it contains locations "to which the host is predicted to write subsequently," i.e., locations that the host processor has not yet specified, as recited in the amended claim. This sort of predictive record keeping is described in detail in the present patent application with reference to Figs. 2-4. The advantages of using this method in failure recovery are explained in the specification in paragraphs 0010-0011 and are described in detail in paragraphs 0043-0044.

Black describes a method and apparatus for controlling read and write accesses to a logical entity. For this purpose, host computers use an "enterprise logical volume identifier," or "ELVID." In rejecting the claims in the present Official Action, the Examiner evidently identified the "record" recited in the claims with Black's host table 181. The host computer uses the host table "to identify an ELVID with a particular physical address identifier specified in the data access request by the host" (col. 27, lines 47-50). In other words, the host uses the table in order to determine the physical location of an ELVID that the host has specified for purposes of data access (col. 25, lines 45-50). If this mapping is not known for a given ELVID, the host looks up the mapping and then adds an entry to the table (col. 25, lines 51-63).

Black makes no suggestion that the host (or any other entity) might, in addition, add further locations to the table that have not been specified by the host, as required by the amended language of claim 1. In fact, since Black's host itself maintains the table, it would appear to be logically impossible for the host to perform this functionality.

Bakke describes a method for maintaining data coherency in a dual I/O adapter, wherein each of the primary and

secondary adapters includes resident write cache data and directory storage devices (abstract). In rejecting the claims in this application, the Examiner cited Bakke as disclosing storage of data on non-volatile storage media. Bakke, however, neither teaches nor suggests maintaining a record of locations to which data are expected to be written by a host processor, or updating the record by adding locations that have not yet been specified by the host processor, as required by claim 1.

Thus, Applicant respectfully submits that claim 1, as amended, is patentable over the cited art. In view of the patentability of claim 1, dependent claims 2-16 are also believed to be patentable.

Claims 17-48 recite apparatus and computer software products that operate on principles similar to the methods of claims 1-16. Independent claims 17 and 33 have been amended in like manner to claim 1. Therefore, for the reasons explained above, claims 17-48 are believed to be patentable, as well.

Notwithstanding the patentability of the independent claims in this application, the dependent claims are also believed to recite independently-patentable subject matter. For the sake of brevity, however, Applicant will refrain from arguing the independent patentability of the dependent claims at present.

Applicant believes the amendments and remarks presented hereinabove to be fully responsive to all of the grounds of rejection raised by the Examiner. In view of these amendments and remarks, Applicant respectfully submits that all of the claims in the present application are in order for allowance. Notice to this effect is hereby requested.

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